AMENDMENTS TO THE SPECIFICATION

Please replace SEQ ID NOS 2-4 on page 11 with the following:

SEQ ID NO: 2 ENGILRKWISRFDVW~~PYL~~ *Zea mays* SuSy1 367-381

SEQ ID NO: 3 ENGIVRKWISRFEVW~~PYL~~ *Zea mays* SuSy2 375-389

SEQ ID NO: 4 ENGILKKWISRFDVW~~PYL~~ *Zea mays* SuSy3

Please replace paragraph [013] with the following :

In one aspect, this activity may be conferred to such compounds by the presence of a shared motif described by the invention, and exemplified by the consensus sequence, Gly-Ile-X_1-X_2-X_3-Trp-X_4-X_5-X_6-X_7-X_8-X_1-Trp (SEQ ID NO: X), where X_1 is a Val or other conservative substitution therefore, where X_2 is an Arg or other conservative substitution therefore, and X_3 to X_8 is any amino acid.

Please replace the last row in Table 1 on page 11 with the following row to add the sequence identifier SEQ ID NO:25:

SEQ ID NO:25			CONSENSUS	**E+GI++-W-----+W---**

Please replace paragraph [024] with the following:

--- **Figure 3** is a series of ~~color~~ photographs of uninjected *Xenopus* blastomeres (Fig. 3A), upon injection of inactive peptides (Fig.3B), and active peptide (Fig. 3C), and microphotographs of the blastomere cleavage furrows with actin stained with rhodamine-phalloidin in uninjected

normal embryos (Fig. 3D), and in embryos injected with the inactive peptide (Fig. 3E) and with the active peptide (Fig. 3F). ---

Please replace paragraphs [026] and [027] with the following:

--- **Figures 6A-6F** are ~~color~~ photographs of electrophoretic gels of fractions after the addition of the peptides to *in vitro* actin to determine the actin bundling activity of the peptides.

Figure 7 is a ~~color~~ photograph of stained gels of G-actin and F-actin showing that the bundling activity of SS2 is not affected by the addition of phalloidin.---

Please replace paragraph [047] with the following:

---Thus peptides can be made, having the sequence of E-GI*---W------W, (SEQ ID NO:26) where, I* means I or V, "-" means any amino acid, wherein the peptide causes actin bundling and inhibits actin depolymerization when polymerized in vitro with actin. In another embodiment, a peptide can be made having the sequence, EH*GIV*R*-W----- V* W (SEQ ID NO: 27), where H* means H or a conservative substitution therefore, V* means V or a conservative substitution therefore, and R* means R or a conservative substitution therefore, and - means any amino acid, wherein said peptide causes actin bundling and inhibits actin depolymerization when polymerized in vitro with actin.---

Please replace paragraph [054] with the following:

--- In one embodiment, such peptides are created substantially homologous to the consensus sequence of Table 1. Effective peptides made using this formula should cause *in vitro* F-actin bundling and block acting depolymerization at peptide to actin ratios at least 100:1, more preferably 50:1, even more preferably about 20:1, more preferably 10:1, and most preferably at least 1:1. As shown in later examples, the first two residues in the Table consensus sequence may not be fully necessary for full activity. Therefore, in another embodiment, the peptides are

created substantially homologous to a consensus sequence having the formula of formula (II): Gly-Ile-X_1-X_2-X_3-Trp-X_4-X_5-X_6-X_7-X_8-X_1-Trp (SEQ ID NO:29), where X_1 is Val or a conservative substitution therefore, X_2 is Arg or a conservative substitution therefore, and X_3 to X_8 can be any amino acid.---

Please replace the first part of paragraph [055] with the following:

--- In another embodiment, active peptides can be fashioned using the formula (I) comprising: Gly-Ile-X_1-X_2-X_3-Trp-X_4-X_5-X_6-X_7-X_8-X_9-Trp-X_{10}-X_{11}-X_{12} (SEQ ID NO:28)or a pharmaceutically acceptable salt thereof. In a preferred embodiment, the addition of a compound of formula (I) results in about 50% of bundled actin when polymerized in vitro with actin. In such an embodiment, each residue of the formula may be as follows: ---

Please replace paragraph [059] with the following:

---Thus the invention further provides for a strategy of building active peptides based upon core sequences having minimal actin bundling activity. Active peptides can be made from discrete blocks of sequence from native sucrose synthase proteins, actin proteins or actin-related proteins, wherein the core blocks of sequence have substantial homology to the consensus sequence of Table 1. In such embodiments, if extended beyond the core sequence, the peptide can be extended using the corresponding amino acid sequence of a native sequence such as the *Zea mays* sucrose synthase protein or a human actin protein or actin-related protein. For example, based on the in vitro bundling activities of SEQ ID NO: 14 and SEQ ID NO: 17, SEQ ID NO: 22 can be seen as the basic core peptide from which a fully active synthetic peptide can built upon, in order to create an active peptide such as SEQ ID NO: 10 or 12. Such a strategy of slowly~~ing~~ building peptides from smaller core blocks of sequence may be useful in cases where a smaller peptide is required, but the actin bundling activity must be retained.---

Please replace Table 3 on page 16 with the following:

SEQ ID NO.	synthetic peptide	Sequence	*In vitro* actin bundling activity
SEQ ID NO:22		SRFEVW	
SEQ ID NO:17	SMIN	WISRFEVW	less active
SEQ ID NO:14	SS16	SRFEVWPYL	less active
SEQ ID NO:23		WISRFEVWPYLKK	
SEQ ID NO:12	SS12	GIVRKWISRFEVWPYL	active
SEQ ID NO:10	SS2	GIVRKWISRFEVWPYLKK	active
SEQ ID NO:24		ENGIVRKWISRFEVWPYLKK	

Please replace paragraphs [0114] to [0115] with the following:

--- Fig. ~~8E~~6E is a photo of gel showing the bundling activity of SS15, SS2 and SS16 peptides *in vitro* after addition to unpolymerized actin with increased molar ratio of peptide:actin = 10:1 and 100:1. At a molar ratio of 10 and 100, the polymerised actin is predominantly in the bundled form, with only small amounts of free F-actin after the addition of SS15 and SS16. Notice in lane 6, where the SS12 active peptide was added at a molar ratio of 100:1, there is clearly no band of free F-actin and very small bands at the lower molar ratio of 10:1, showing that the most effective peptide in bundling all the actin is likely SS12. The SS15 peptide does not completely bundle all the actin until administered at a higher molar ratio than 10. The SS16 peptide however appears to exhibit a high activity in binding actin at a molar ratio of 10 and then reaches a maximum level of activity somewhere between a molar ratio of 10 and 100, after which the activity drops off dramatically.

Referring now to Fig. ~~8F~~6F, the gel shows bundling activity of SS12 at molar ratio to actin of 10 and 50. Even at the upper levels of a molar ratio of 50, all of the actin is in the bundled form with no G-actin or free soluble F-actin. The effective peptide to actin ratio for bundling for SS16 was >16:1 and for SS15, about 16:1, as opposed to 1:1 for SS2 and SS12, the most preferred embodiments.---